

# FE107

Diagram No. 5530-5

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

## DESCRIPTIVE REPORT (HYDROGRAPHIC)

Type of Survey ..... Field Examination

Field No. ....

Office No..... FE-107

### LOCALITY

State ..... California

General Locality .. Suisun Bay

Locality ..... Southern Pacific

Railroad Bridge

1952

CHIEF OF PARTY  
Robert A. Marshall

### LIBRARY & ARCHIVES

DATE ..... November 12, 1952

☆ U.S. GOV. PRINTING OFFICE: 1976-669-441

NOTE: A new system for registering Field Examinations (FE's) was established in 1980. All FE's are now consecutively numbered as shown hereon. The date shown in the new format is the actual date of survey. This material was previously registered as;

FE No.4 1952

# FE107



762

# FENo.4 1952

FE-107

Diag. Cht. No. 5530-5

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey .....HYDROGRAPHIC

Field No. .... Office No. F. E. No. 4,  
1952

### LOCALITY

State .....CALIFORNIA

General locality .....SUISUN BAY

Locality .....SOUTHERN PACIFIC  
RAILROAD BRIDGE

1952

CHIEF OF PARTY

Robert A. Marshall

LIBRARY & ARCHIVES

DATE NOV 12 1952

B-1870-1 (1)

FENo.4  
1952



DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FE No 4, 1952

REGISTER No. ~~H-7784~~

Field No. (Hydrographic Field Investigation  
of H-7784 Year 1949)

State California

General locality Suisun Bay

Locality East of Southern Pacific Railroad Bridge

Scale 1 : 5000 Date of survey 29 July 1952

Instructions dated Director's Letter 22/MEK, S-2-B0  
dated 23 July 1952

Vessel USC&GS Ship BOWIE

Chief of party Robert A. Marshall

Surveyed by Robert A. Marshall

Soundings taken by fathometer, ~~machinerecorder, hand lead, and~~

Fathograms scaled by G. E. LaRoche

Fathograms checked by F. W. Lingenfelter

Protracted by Robert A. Marshall

Soundings penciled by Robert A. Marshall

Soundings in ~~XXXXXX~~ feet at ~~MLLW~~ MLLW

REMARKS:

225



DESCRIPTIVE NOTES TO ACCOMPANY

FIELD INVESTIGATION OF

HYDROGRAPHIC SURVEY ~~H-7784 (1949)~~  
FE No. 4, 1952

Field investigation in the vicinity of the 18-foot shoal located 300 meters northeast of the Southern Pacific Railroad Bridge, between Suisun Point and Benicia, California.

INSTRUCTIONS:

Instructions for this investigation are contained in the Director's letter 22/MEK, S-2-B0, dated 23 July 1952.

LOCALITY:

This survey covers the area in vicinity of the 18-foot shoal approximately 300 meters northeast of the Southern Pacific Railroad Bridge at Benicia, California.

Area of survey is approximately one mile square and is adjacent to the east side of the Southern Pacific Railroad Bridge.

DATE OF SURVEY:

The date of this field investigation is 29 July 1952.  
Date of original survey (H-7784) is (7-30) Sept. 1949.

VESSELS AND EQUIPMENT:

All hydrography was done with Launch No. 113 operating from the Ship BOWIE, using Type 808 J Fathometer No. 66.

The U.S. Coast Guard Tender WILLOW transported the survey crew and Launch 113 from Oakland to Suisun Bay and return for this survey.

CONTROL:

Control was furnished by triangulation, "Geographic Positions of Triangulation Stations, California, Zone VII", and from Topographic Sheets T-7136 and T-7137 (Year 1949).

A blue-line-print of Hydrographic Survey H-7784 was furnished for this investigation. No additional control was necessary other than what is shown on original survey.



Descriptive Notes to Accompany Field Investigation of  
Hydrographic Survey ~~H-7784 (1949)~~: (Continued)  
FE No 4, 1952

SURVEY METHODS:

A series of closely spaced lines were run parallel to the Southern Pacific Railroad Bridge, and numerous cross lines were run normal to the bridge.

RESULTS:

The channel area between the Southern Pacific Railroad Bridge and the charted 18-foot shoal has shoaled considerably. The northwest and southeast limits of this investigation are in fair agreement with the 1949 surveys.

A tracing of the boat sheet was made after the survey was completed and furnished the Supervisor, Western District Office, San Francisco, California.

An ozalid print of subject tracing is appended to this report.

TIDE AND VELOCITY CORRECTIONS:

Tide corrections were obtained from staff readings at the standard tide gage, Benicia (Arsenal Dock), California, Latitude  $38^{\circ} 02' 60''$ , Longitude  $122^{\circ} 08' 07''$ , now in operation. The tide staff readings were recorded in Form 277, which accompanies the records for this survey. MLLW corresponds to 4.6 feet on the staff at Benicia, according to records on board Ship BOWIE. The tides were plotted on coordinate paper and corrections taken directly from the curve. This sheet of coordinate paper is a part of this report and contains all the tidal data for this survey.

The bar check observations indicate that the velocity correction is zero for all soundings.

*Robert A. Marshall*  
Robert A. Marshall  
Comdr. USC&GS



STATISTICS

Field Examination Survey H-~~7784 (1949)~~ <sup>FE 4, 1952</sup>

<u>DAY</u>	<u>VOL. NO.</u>	<u>DATE</u>	<u>NO. POSITIONS</u>	<u>STATUTE MILES</u>
a (red)	1	29 July 1952	127	11.8

LIST OF SIGNALS

<u>Name Used in Hydrographic Survey</u>	<u>Origin of Station</u>
ARE	Topographic Sheet T-7136
BAN	" " T-7137
DER	" " T-7136
DIA	" " T-7137
FOR	" " T-7136
GAB	" " T-7136
GET	" " T-7136
MOC	BULLS HEAD POINT MOCOCO FERTILIZER CO. STACK, 1922, 1939
SOS	Topographic Sheet T-7136
WER	CLOCK TOWER FLAGSTAFF, 1909

## TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Survey~~

19 November 1952

Division of Charts:

R. H. Carstens <sup>GFJ</sup>

Plane of reference approved in 1  
volumes of sounding records for

~~HYDROGRAPHIC SHEET~~

FE No. 4 1952

Locality Carquinez Strait, Suisun Bay, California

Chief of Party: R. A. Marshall in 1952

Plane of reference is mean lower low water, reading

4.6 ft. on tide staff at Benicia (Arsenal Dock)

45.4 ft. below B. M. 8 (1936)

Heights of mean high water above plane of reference is 5.1 feet.

Condition of records satisfactory except as noted below:

*E. C. McKay*

Section of Tides

Chief, Division of Tides and Currents.



# Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. F.E. No. 4, 1952

## Records accompanying survey:

Boat sheets ...<sup>1</sup>.; sounding vols. ...<sup>1</sup>....; wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls 1 Eny.;  
 special reports, etc. 1 Descriptive Report;  
 .....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	.....	127
Number of positions checked	.....	5
Number of positions revised	.....	0
Number of soundings revised (refers to depth only)	.....	0
Number of soundings erroneously spaced	.....	15
Number of signals erroneously plotted or transferred	.....	0
Topographic details	Time .....	0
Junctions	Time .....	0
Verification of soundings from graphic record	Time .....	1

Verification by *Am Zaskind* ..... Total time ...<sup>6</sup>... Date *5/21/53*  
 Reviewed by *Am Zaskind* ..... Time ...<sup>3</sup>... Date *5/22/53*

## REVIEW OF FIELD EXAMINATION 4, 1952

The purpose of this field examination was to investigate the changes in bottom configuration in the vicinity of the 18-ft. shoal which is located 300 meters northeast of the Southern Pacific Railroad Bridge, between Suisun Point and Benicia, California. The instructions for this investigation are contained in the Director's letter 22/MEK, S-2-BO, dated July 1952.

A comparison between the most recent survey of the shoal by this Bureau (H-7784, 1949) and the field examination shows the shoal to be elongating principally in a southwestwardly direction with a slight shifting of the feature to the northward. The bottom has shoaled as much as 9 ft., as for example, in lat.  $38^{\circ} 02.63'$ , long.  $122^{\circ} 07.05'$ , where a depth of 18 ft. on H-7784 falls in present depths of 9 ft. On the south side of the shoal in depths greater than 30 ft., the bottom has deepened as much as 5 ft.

The depths shown on Chart 5534 (latest print date 9-1-52) are in harmony with the field examination depths, except in the area southwest of the 18-ft. curve where the chart shows a depth of 21 ft. This latter area was dredged by the U.S. Corps of Engineers (Bp. 49434) in October 1952 subsequent to the field examination, and supersedes the present survey in the common area.

The hydrography obtained during the field examination is inked on the attached section of a blue line print of survey H-7784.

The Descriptive Report adequately covers all matters pertaining to the examination. No further discussion is considered necessary.

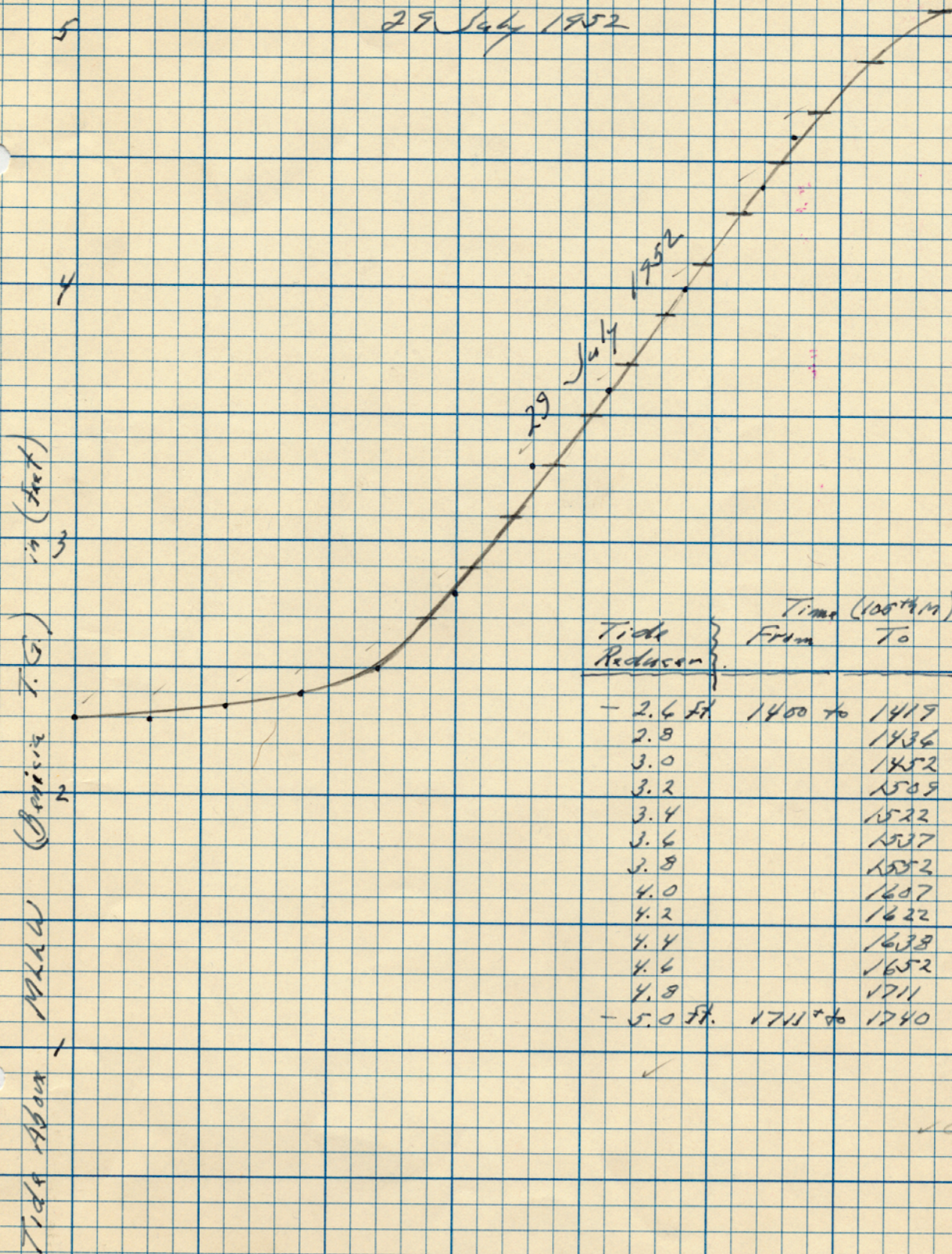
I. M. Zeskind  
5-22-53

Inspected by: R. H. Carstens



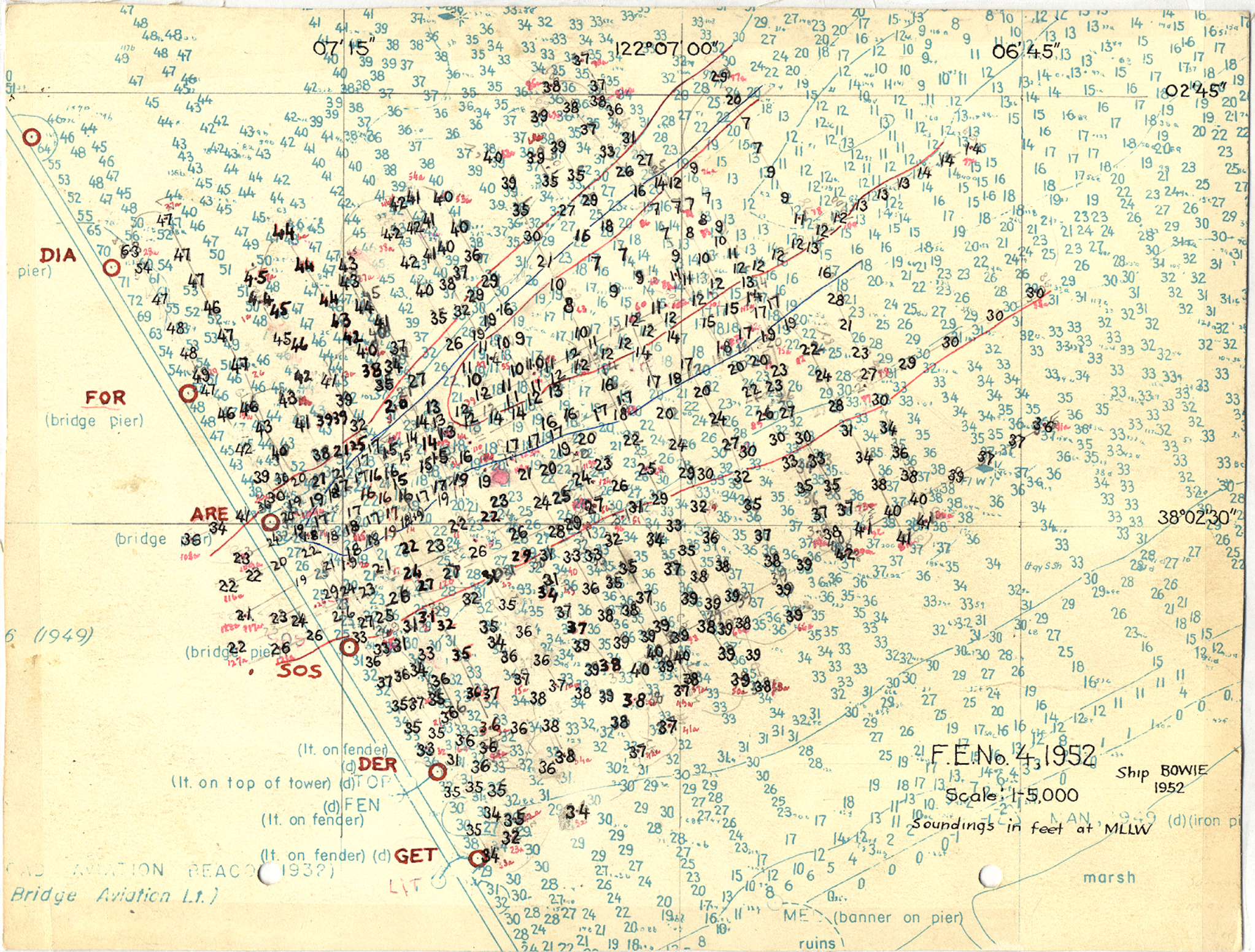
Tide Curve  
Benicia, Calif.  
 (From Staff Readings)

29 July 1952

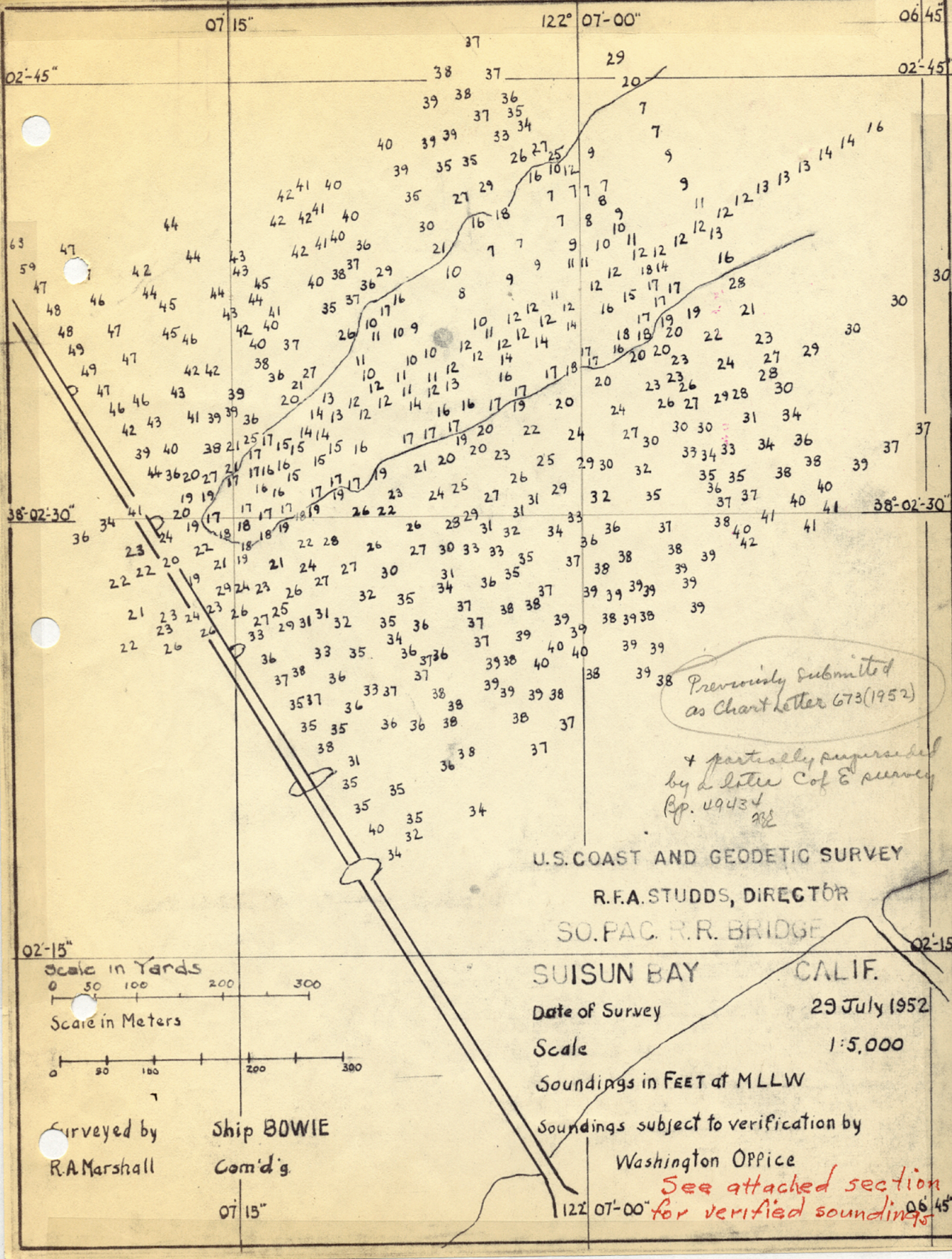


✓ PMAS











## NAUTICAL CHARTS BRANCH

SURVEY NO. F.E. No. 4, 1952

## Record of Application to Charts

[illegible]

M-2168-1

**A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.**